Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in this application:

Listing of Claims:

Claim 1 (Currently amended): A process for the continuous production of polyurethane foam from at least one polyol component and at least one isocyanate component in the presence of water as a blowing agent and optionally further additives, comprising the steps of:

metering into a mixing chamber of a ~~mixing unit~~static mixer and mixing therein at pressures of from about 3 to about 200 bar to form a polyurethane reaction mixture, the at least one polyol component, the at least one isocyanate component, the water and optionally the further additives;

generating bubble nuclei in the polyurethane reaction mixture by atomization thereof in a pressure-reduction body at pressures of from about 3 to about 200 bar, wherein the pressure is adjusted in the direction of flow downstream of the pressure-reduction body by a throttle body;

causing the polyurethane reaction mixture containing bubble nuclei to flow out through the throttle body; and

applying the polyurethane reaction mixture containing bubble nuclei to a substrate for foaming and curing.

Claim 2 (Original): The process according to Claim 1, wherein the mixing in the mixing chamber is performed at pressures of from about 5 to 200 bar and wherein the atomization is performed at pressures of from 5 to 200 bar.

Claim 3 (Cancelled).

Claim 4 (Original): The process according to Claim 1, wherein the pressure-reduction body comprises one or more nozzles or orifices.

Claim 5 (Original): The process according to Claim 4, wherein the cross-sectional area of the one or more nozzles or orifices openings is adjustable.

Claim 6 (Original): The process according to Claim 1, wherein the throttle body comprises a diaphragm valve or pinch valve.

Claim 7 (Original): The process according to Claim 1, wherein the maximum pressure between the pressure-reduction body and the throttle body is about 20 bar.

Claim 8 (Original): The process according to Claim 1, wherein at least one bubble nucleating agent is dissolved in the polyol component and/or the isocyanate component in the mixing chamber before the mixing.

Claim 9 (Original): The process according to Claim 1, wherein at least one bubble nucleating agent is injected into the mixing chamber and is dissolved there.

Claim 10 (Currently amended): In an apparatus for the continuous production of polyurethane foam, comprising a ~~mixing unit~~ static mixer having a mixing chamber and supply lines for the reaction components and a discharge opening for the polyurethane reaction mixture, the improvement comprising connecting a pressure-reduction body to the discharge opening and arranging an adjustable throttle body in the direction of flow downstream of the pressure-reduction body.

Claim 11 (New): The apparatus according to Claim 10, wherein the pressure-reduction body comprises one or more nozzles or orifices.

Claim 12 (New): The apparatus according to Claim 11, wherein the cross-sectional area of the one or more nozzles or orifices openings is adjustable.

Claim 13 (New): The apparatus according to Claim 10, wherein the throttle body comprises a diaphragm valve or pinch valve.